



**O & P CONSTRUCTION
SERVICES LTD**

CHARTERED BUILDING COMPANY

BUSINESS CONTINUITY PLAN

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1.1 Purpose and Scope of this Plan

Unplanned events can have a devastating effect on any business. It is essential for the purposes of continuity, and to uphold our ability to maintain our promises and deliver our client expectations, that we plan and make allowances for events which may be out of our direct control.

1.2 Authority of this Plan

Stuart N Oxley (Managing Director) takes full authority of this plan in the event of emergency. The plan covers all O&P Construction Services Ltd employees, and will be followed comprehensively.

1.3 Objectives of this Plan

Our business continuity management policy has been formulated with careful consideration, to allow our company to continue its day to day operations and meet the demands of our clients in any event. The policy is reviewed annually by the Managing Director Stuart Oxley, and is tested annually to ensure the plans outlined, are feasible, realistic, and deliver the continuity which is our ultimate aim.

1.4 Scope of Disasters and Failures Covered by this Plan

The possible crisis factors which are deemed to affect our business, are listed below, and will be considered individually in further detail:

IT and Communications Services Failure

Utility Failure

Building Access Restrictions and Building Loss

Loss or Illness of key staff

Outbreak of Disease or Infection

Fire to Premises

Fuel Shortage

Power Cut

Theft and/or vandalism of company property

1.0

INTRODUCTION



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1.5 Probability and Consequence Reasoning

When analyzing the potential for crises which could affect our day to day operations, we look at the probability, frequency and consequence of events which could affect our business and our clients in a negative way. We use a numerical scale to quantify the potential impact of a crisis, and formulate this scale thus:

Probability and possible consequence for each factor are scaled 1 – 5. The results of both are then multiplied, to give an action score which is then analyzed. Scores of between 1 – 5 are considered to be so small, that they are unlikely to occur, and if they did, the consequence would be so minimal, that the cost to plan against this occurrence would outweigh the potential cost to rectify the problem should it occur. Scores between 6 – 20 are analyzed, planned, and reviewed. Scores of 21+ are considered to have such risk that immediate management attention is required to ensure no disruption to business activity occurs. The 21+ scores (once incurred immediate attention, and the risk reviewed) then fall into the 6 – 20, and are reviewed and planned.

Probability, Consequence and Action tables are shown below.

	Very Unlikely	Unlikely	Very Possible	Likely	Highly Likely
Probability	1	2	3	4	5

	Minimal	Slight	Moderate	Significant	Severe
Consequence	1	2	3	4	5

	0 to 5	6 to 10	11 to 15	16 to 20	21 to 25
Action	No Action	Plan and Review	Plan and Review	Plan and Review	Immediate Action

1.6 Activation of this Plan

The contents of this plan will be put into practice in the event of any deviation from normal activity in any area. The plan will be activated by either Stuart Oxley, or Robert Mitchell in Stuart Oxley's absence.



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2.1 IT and Communications Services Failure

Our IT consultant Contedia Ltd, provide us with both pro-active and re-active protection of our IT systems and processes under a standard maintenance agreement.

2.1.1 O&P Construction IT General Applications

Summary of our server operating system: Windows Small Business Server 2003 Service Pack 2

O&P Construction PCs: Various Windows XP SP2 and Vista SP1, including standard office software such as Excel, Word, Outlook and Power-point.

Data backup & recovery: Since Small Business Server 2003 includes both Windows Server 2003 and Exchange Server 2003 – with minor customisations to meet Microsoft's imposed licensing restrictions of 75 client PCs/users – the customised version of Microsoft's bundled NTBackup program is a suitable solution to perform full backups of the server on to the internal tape device (SLR 75). This process backs up all data and operating system files into the NTbackup backup file format. From this format either individual files and folders can be recovered or, providing access to the server's original installation media is available a full system restore is possible. The NTbackup program performs a full system backup nightly on workday nights at 9pm and a cycle of 5 media are used where only the current/next required media are kept on-site.

A full system recovery from NTbackup files DOES rely on access to original/identical installation media and product keys. A service provided by Contedia to maintenance agreement customers, the company uses its own software and an external hard disk drive to periodically – when making a customer site visit – take a 'snapshot' image of the server in its entirety. Contedia employs this method to allow for a potentially swifter recovery solution in combination with the customer's own NTbackup data for data/Exchange data changes since the last snapshot was taken. This specialist software also allows for the bare metal recovery of the system to new/non-identical hardware where circumstances dictate that the original server hardware is either unavailable (stolen) or irreparable.

2.1.1.1 Agreed Strategy

In the event of any breakdown of the general office software, it is highly likely that the breakdown will be of an extremely short duration, and will be rectified by our

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DISASTER AND FAILURE
SCENARIOS



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IT consultants Contedia Ltd who have remote access to our computer systems. It is expected that any breakdown would be rectified within 4 hours, and would not have any detrimental impact to our day to day operations. Other forms of communication will be used should urgent and essential dealings be required during this time.

2.1.2 O&P Construction IT Bespoke Applications

Data integrity: The server, whilst basic in specification to meet the limited needs of the business in terms of number of employees etc., has been specified and subsequently configured to provide a degree of hardware redundancy by means of RAID (see <http://en.wikipedia.org/wiki/RAID> for explanation of RAID). The server has two 80GB hard disk drives, which, through the RAID controller card, are configured to provide a single RAID 1 array of approximately 80GB.

Note: RAID 1 mirrors the contents of the disks, making a form of 1:1 ratio real-time backup. The contents of each disk in the array are identical to that of every other disk in the array. A RAID 1 array requires a minimum of two drives. RAID 1 mirrors, though during the writing process copy the data identically to both drives, would not be suitable as a permanent backup solution, as RAID technology by design allows for certain failures to take place.

Therefore, in the event that one of the two physical hard disk drives fails for whatever reason, the server will continue to operate normally – as far as the end-user is concerned – albeit under an alarm condition. This allows a replacement disk drive to be sourced and installed in-situ and for the RAID controller card to automatically rebuild the data on the new disk such that maximum or 'optimal' redundancy is restored without any downtime.

Antivirus and Antispam: O&P Construction employs Sophos' acclaimed Small Business Suite 2.0 software to provide both server and client PC antivirus protection. Administration, deployment and management of the antivirus software for all machines on the network is achieved from the server. Part of the Small Business Suite also provides for Sophos' PureMessage application which integrates directly with Microsoft Exchange and therefore scans in- and outbound email for both spam and messages which contain any form of viral infection. Where recognised, infections are removed before reaching the Exchange Information Store and suspect messages are quarantined for the end-user to make the ultimate decision as to its usefulness. Senders can be allowed or blocked, again, having effect beyond the Exchange Information Store and therefore BEFORE reaching any vulnerable areas of the O & P Construction domain and network.



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Finally, because Contedia currently – but separately from the maintenance agreement – host our domain name, they also manage all DNS record entries including mail records which allow email to correctly locate the IP address of O&P's Small Business Server. Because they have the ability to manipulate these records, in the event that it is necessary to re-route mail, they can do so at very short notice (subject to the unavoidable time it takes DNS record changes to propagate the internet and therefore become effective). Contedia also offer, as a matter of course, backup mail queues for O&P's email, such that in the event the Small Business Server is offline or unavailable for a period of time (but expected to be restored in some fashion on the same IP address) all mail sent to the organisation will be held and subsequently delivered once the server becomes available again, losing no mail in the process.

2.1.2.1 Agreed Strategy

Due to the comprehensive protection provided by our IT consultants, we would not expect any major disruption to our ability to communicate and record data which is relevant to our dealings with clients. Any breakdown in these comprehensive recovery and protection systems would be of a short duration (less than 24hrs) with all client data stored in a secure location. Other forms of communication will be used should urgent and essential dealings be required during this time.

2.2 Building Access Restrictions and Building Loss

There is the possibility, that access to the building may be restricted due to adverse weather conditions such as snow and ice. It may also be the case that the use of our headquarters is not possible due to utility failure or fire.

2.2.1 Agreed Strategy

In the event that the premises from which we would normally undertake our business operations are unavailable, we have the capacity to operate from the private home of the Managing Director Stuart Oxley. Storage facilities are available on the premises, including a home office with remote access to the company's servers and data (through Contedia Ltd) and capacity for the use of key staff. These key staff will then take charge of company dealings. We expect that any event such as this, would compromise our dealings with clients for no more than a 48hour period, with normal functioning of our operations following immediately after. The company has multiple storage of contact details for its project stakeholders and staff, so communication throughout will remain constant. The company's insurances mean that in the medium term, alternative premises can be provided to allow us to return to normal working conditions.



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In the event of a power cut - **Uninterruptible Power Supply ("UPS")**: To 'filter' the incoming mains power supply before it reaches critical network components, including the server, network switches and router, an APC SUA1000RM12U UPS is installed in the data cabinet and connected directly to the server which provides for monitoring and management via the APC Powerchute application. Contedia monitor the status of the UPS and logged events, such as fluctuations in power supply, outages and battery condition, on an ongoing basis under the maintenance agreement.

2.3 Loss or Illness of key staff

2.3.1 Agreed Strategy

In the event that one of our key staff becomes long term ill, ceases to work for the company, is involved in a fatal accident or passes away from natural causes, the company will be able to continue and fulfill its contractual obligations. A list of key staff is shown, along with arrangements for cover:

Stuart N Oxley FCIOB ACMI (Managing Director) – Raymond Oxley FCIOB and Marie Oxley

Robert Mitchell MCIOB (Contracts Manager) – Andrew Walch ICIOB, then permanent replacement

Andrew Marshall ACIOB (Contracts Manager) – Roger Marshall, then permanent replacement

Richard Fletcher ICIOB (Estimating) – Robert Mitchell MCIOB, then permanent replacement

Each replacement member of staff shown has previously been employed in the role they are expected to cover, and are absolutely capable of undertaking the tasks required of them when undertaking this job role.

In the event that more than one of our key staff is no longer with the company, permanent replacement will be arranged through our agencies, and extensive contacts within the industry.



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2.4 Outbreak of Disease and/or infection

This section will primarily focus on the swine flu pandemic. Current assumptions suggest absence rates for illness may reach 12% of the workforce at its peak. The best current estimate for length of illness is that:

- Half those people becoming ill will recover within 7 calendar days
- 25% will need between eight and 10 calendar days to recover
- 25% will have symptoms for 11 or more calendar days

Current data suggests that people will be unavailable for work for an average of 10 calendar days for cases without complications, and 14 calendar days for those who experience complications.

Included in these durations, is the expected recuperation period. Also included, is the estimate for those at home caring for ill children / parents. School closures (and the impact this has on childcare) is not included. The government and health agencies have now abandoned containment of the virus; therefore school closure is not expected to impact our staffing levels.

The symptoms of swine flu include:

- Headache
- Runny nose
- Sore throat
- Aching muscles
- Loss of appetite
- Unusual tiredness
- Diarrhoea or vomiting
- Shortness of breath or cough

These symptoms are regularly communicated to all employees, who are encouraged to go home and stay at home if they display these symptoms. They are encouraged to return only when they are better. If the individual is not able to leave immediately, they are encouraged to adopt good hygiene practice, and avoid contact with others.

Site managers and senior managers are able to request that an employee leaves the workplace (if showing serious and obvious symptoms of swine flu and refusing to leave work), if subjectively they feel, it is for the good of the individual, and the greater good of all employees.



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Good hygiene is encouraged generally, with employees being encouraged to wash their hands, and make use of the tissues and sanitizing gel which has been made available to them by the company. Face masks are not considered to be an appropriate precaution at this time. O&P Construction does not intend to close for business to prevent outbreak of swine flu, nor does it intend to close if employees catch the virus. It is felt that the measures outlined, and effective communication of the seriousness of the virus, will enable the company to fulfill its contractual agreements.

2.4.1 Agreed Strategy

In the event that multiple employees are struck down by the virus at any one time, the company has the ability to continue to provide its services. Numerous employees have shown willingness to work more than 48 hours per week (agreement to be in writing). With no further special measure, this will allow our employees to work 78 hours per week if our situation became critical (11 hours rest pd x 6 days, + 24 hours uninterrupted rest = 90 hours. 168 hours per week – 90 hours = 78 hours). These arrangements for new working hours will be instigated immediately after it becomes apparent that there may be a shortfall in labour or management resource.

2.5 Fuel Shortage

Disruption to our fuel supply could occur for a number of reasons:

Scarcity of supply

Technical problems with the fuel infrastructure

Industrial action / public protest

In the event of any of the above, the situation could be worsened by panic buying

A worst case scenario is that petrol stations and commercial supplies could be exhausted within 48 hours of an incident, and it could take up to 10 days before stock levels are fully restored.

2.5.1 Agreed Strategy

If a fuel shortage occurs, we shall be able to fulfill our contractual obligations, through adherence to the following measures:

Reduction of our organizations dependency on fuel

Car sharing will be encouraged and used, to reduce the need for fuel use

Reducing fuel usage

Non essential journeys will be cancelled to enable us to fulfill our essential services

Improving the resilience of company supply chains



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A quota of diesel top enable the running of company transport has been arranged with a plant hire supplier in the event of fuel shortages.

Reallocating resources to deliver only key products and services

Effective communication with staff, customers, suppliers and other key stakeholders in advance of, and during a major fuel disruption.

The company will communicate at all times with its project stakeholders, regarding its planned activities

To re-iterate, the company does not expect any major disruption to supplies within the next year, but has the capacity to cope should this occur.

It is essential that the business continuity plan is tested at least annually, to ensure the plan is effective and fulfills its reason for existence: to minimize disruption.

O&P Construction undertakes periodic testing of the plan, with particular focus on the possibility of IT and communications failure. This is done in conjunction with Contedia Ltd and has thus far found the systems we have in place suitable and sufficient. Two tests of our systems will take place this calendar year, focusing again on IT and communications, but also the effect of a fuel shortage. Managing Director Stuart Oxley will decide when these tests will take place, and they will not be made known to staff before they are announced with immediate effect. The results of these tests will be measured, to ensure that business continuity is maintained, and that contractual obligations to our clients and subcontractors are fulfilled.

3.0

TESTING THE BUSINESS
CONTINUITY PLAN

The Business Continuity Plan will be reviewed after each test set out in section 3.0. Findings will be analyzed, and improvements made should the plan be found to be lacking in any way. This will be a continuous process, with the company's written policy being updated as and when is necessary.

4.0

UPDATING AND REVIEW
OF THE BUSINESS PLAN

This policy Document comes into effect on - 4th January 2010

Review Date – Continuous review by the management team – written policy

Renewal – 4th January 2011

Managing Director Signed – Mr Stuart N Oxley FCIOB ACMI